

## Laboratory

## **PLAGUE**

**Agent Overview:** The causative agent of Plague is the bacterium *Yersinia pestis*, a short,

aerobic, gram negative bacillus.

Lab Specimen Submittal:

Authorization by Dr. Jane Getchell, DPHL director, Christina Pleasanton,

DPHL deputy director, or Dr. Jack Liou, bioterrorism coordinator.

Type of Specimens Necessary for Testing:

<u>Environmental testing for culture</u>: Use two dry Dacron swabs (not cotton) to collect specimen and put in two separate sterile tubes.

<u>Clinical specimen for culture and/or PCR</u>: Acceptable PCR specimens include bronchial washes, transtracheal aspirates, sputums, and nasopharyngeal swabs. **No transport medium can be used for PCR testing.** Acceptable specimens for culture include the above plus blood, aspirate of bubonic tissue or biopsied specimen of liver, spleen, bone

marrow, and lung. However, sputum specimens for culture should be avoided

whenever possible.

**Food specimens**: at least 10 grams of food samples.

Grown organism for culture and/or PCR from sentinel laboratory: referred organism on agar or in liquid media for rule-out testing or

confirmation

Packaging Instructions: Environmental specimens must be double bagged and the outside of the bag

decontaminated (10% bleach).

Grown organisms, food or clinical specimens must be in unbreakable double

containers and outside of container decontaminated (10% bleach).

Receiving Specimens

at DPHL:

Authorized specimens are accepted at the back of the building by the loading dock. Submitter must present ID and have proper forms completed.

Handling of Specimens: Chain of custody procedures must be followed for environmental samples or

any samples, specimens and materials that could be used as evidence in a legal proceeding. Environmental samples are kept at room temperature and clinical specimens at refrigerator temperature (in a cooler, but not frozen) until delivered to the laboratory. **Blood culture bottles must always remain at room temperature until received at laboratory. Blood cultures should be tested at the hospital laboratory.** Other specimens should remain at room temperature if they can be transported to the lab within two hours. If transport is delayed, refrigerator temperature (in a cooler, but not frozen) is

acceptable.

**Reporting Results:** Preliminary: A preliminary positive or negative test result is issued upon

completion of PCR. PCR may take 24 hrs. However, all PCR results must be

confirmed by culture.

Negative: Negative culture reports are issued after 5 days. (7 if patient has

been treated with antibiotics)

Positive: Positive culture reports may be issued within 72 hrs.

Contact Information: Jane Getchell, DrPH, DPHL director, 302-223-1520 (24/7 coverage).

24/7 Emergency Contact Number: 1-888-295-5156

Revised: 05/2008